Federal Aviation **Administration**

Great Lakes Region Illinois, Indiana, Michigan, Minnesota, North Dakota, Ohio, South Dakota. Wisconsin

2300 Fast Davon Avenue Des Plaines, Illinois 60018

POLICY AND PROCEDURES MEMORANDUM - AIRPORTS DIVISION

NUMBER

: 5210.2

DATE

JUL 2 7 1992

SUBJECT:

: Bird Hazard Reduction - Waste Disposal Facilities

REFERENCES: FAA Order 5200.5A, Waste Disposal Sites On or Near

Airports, 1/31/90

Policy Guidance Letter, Order 5200.5A, Waste Disposal Sites On or Near Airports, ARP-1, 6/20/90

Policy Guidance Letter, Compost Sites on Airports, AAS-1, 7/5/90

Policy Guidance Letter, Coordination on Waste Disposal Sites Near Airports, ARP-1, 10/10/90

Policy Guidance Letter, Expansion of Airports Near Landfills, ARP-1, 1/30/91

Environmental Protection Agency, Solid Waste Disposal Facility Criteria, Effective October 9, 1993, 40 CFR Part 258, Subpart B - Location Restrictions, Paragraph 258.10 , Airport Safety, Appendix 1.

1. Background. Order 5200.5, 10/16/74 was written to provide guidance on the establishment, elimination or monitoring of landfills, open dumps, waste disposal sites or similarly titled facilities on or in the vicinity of airports. In order to reduce the potential for a bird/aircraft strike hazard, this Order established a criteria of 5000 feet from a runway serving reciprocating engine-powered aircraft and 10,000 feet from runways serving turbine-powered aircraft, within which land use for disposal sites would be considered incompatible with airport Order 5200.5A, in addition to clarifying definitions, expanded the area of consideration to include a 5mile radius of concern.

PPM 5210.2

The Environmental Protection Agency subsequently adopted this criteria for consideration in approving waste disposal facilities (PL 94-580, Resource Conservation and Recovery Act). 40 CFR Part 258 of this Act has been added, effective October, 1993 to require FAA notification for proposed new or expanded municipal solid waste landfill units (MSWLF). It also requires the owner/operator to demonstrate the units are designed and operated so that the MSWLF unit does not pose a bird hazard to aircraft.

This PPM is intended to provide guidance in the application of Order 5200.5A.

2. <u>Definitions:</u>

- a. Putrescible Waste: Putrescible wastes are solid wastes which contain organic matter capable of being decomposed by microorganisms and of such character and proportion as to be capable of attracting or providing food for birds.
- b. Turbine-powered aircraft: Aircraft in which the main propulsion force is supplied by a gas turbine which drives either a propeller or compressor. (May be either turbo prop or turbo jet.)
- c. Used by turbine powered aircraft: An airport that has based turbine powered aircraft or one which sells turbine fuel.
- 3. <u>Policy/Procedures</u>. This PPM provides general guidance on the procedures to be followed concerning the compatibility determination of waste disposal sites on or within a 5-mile radius of an airport. Waste disposal sites include sites for the disposal of putrescible as well as nonputrescible material.
- a. Sludge disposal, effluent spraying, compost activities and any other <u>waste disposal</u> activities should normally not be allowed within the property limits of the airport as shown on the approved Airport Layout Plan.
- b. Disposal sites for putrescible material, i.e. garbage dumps, landfills, and other similarly licensed or titled facilities, are to be considered incompatible when located within 5000 feet of a runway used exclusively by aircraft powered by a reciprocating engine or within 10,000 feet of a runway used by turbine-powered aircraft. See exhibit A and B.

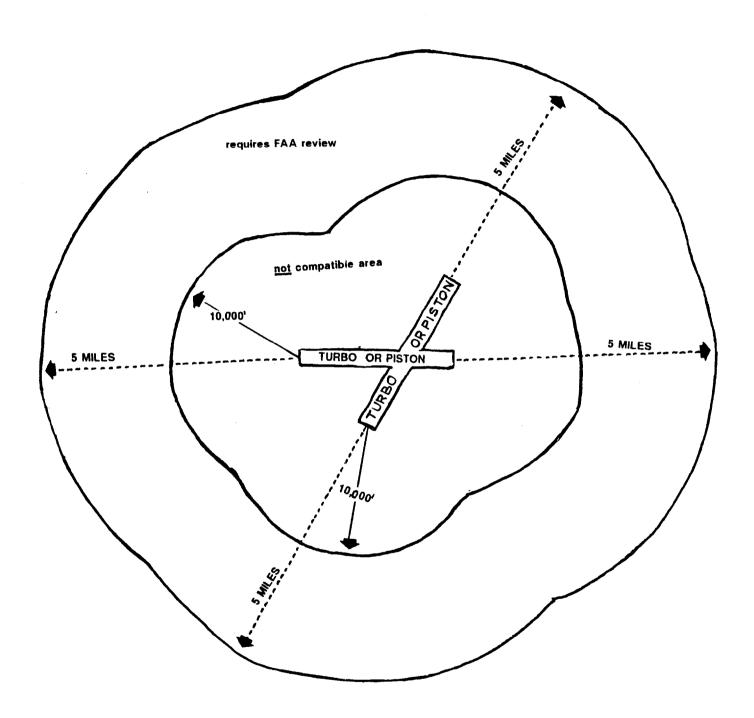
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- Disposal sites for nonputrescible material, e.g. construction demolition waste, automobile junk yards, kitchen appliances, and incinerator ash residue, are normally considered incompatible within 5000 feet of a runway used exclusively by aircraft powered by a reciprocating engine or within 10,000 feet of a runway used by turbine powered aircraft. However, depending upon the specific proposal, the results of a site investigation, and the proposed location relative to the runway approach/departure paths, certain types of restricted nonputrescible disposal operations may be found non-objectionable off airport, provided assurances are obtained from the proponent. and included in the licensing process, that should the site cause an increase in bird activity which might be hazardous to safe aircraft operations, action will be taken to mitigate the hazard or close the site. Any non-objectional determination requires prior coordination with AGL-600.
- d. All proposed compatibility determinations of disposal sites located within a 5-mile radius, will require the following documentation to be forwarded to AGL 620:
- (1) A description of the existing method of operation of the facility or a description of the proposed method of operation for a planned facility;
- (2) An assessment and written evaluation by a US Department of Agriculture, Animal Damage Control Official. This assessment is required only if the landfill in question is outside the 5,000 and 10,000 feet criteria but within 5 miles of the airport and under the approach/departure path of the airport runways or directly across this path from known wildlife attractions, such as a body of water. However, the ADO may contact the USDA/ADC for expertise as necessary.
- (3) A compatibility evaluation by the Airport Engineer, in which the consequences of an identified incompatible land use, as it relates to airport operations, are addressed; (This should also include an evaluation by the airport owner.) This evaluation should include as a minimum:
 - (a) The type of airport; -
 - (b) Number and type of operations;
 - (c) History of hazardous bird activity;
- (d) State licencing requirements and enforcement procedures;

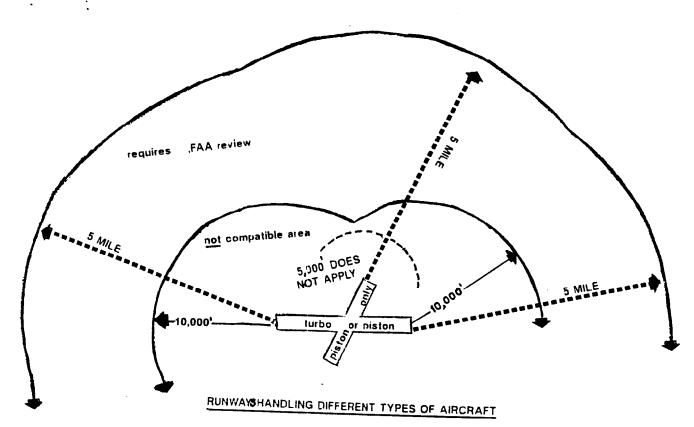
- (e) An estimate of the impact on flight safety at the airport based on all known local factors;
- (f) Assessment of the airport owner's past cooperation in complying with regulations; and,
- (g) Assurances obtained by the licencing agency and the proponent concerning actions to be taken should the site approach a situation which could be considered a hazard to aircraft operations at the airport.
 - (4) A sketch of the actual or proposed site indicating:
- (a) Normal airport traffic patterns in relation to the site location as provided by the airport operator/owner;
- (b) Likely nesting, feeding, and watering locations as indicated in (2) above.
 - e. The documentation provided by the Airports District Office will be reviewed by AGL-620, who will provide comments, make recommendations, and may consult/coordinate with AAS- 310.
- f. AGL-620 is considered to be the Regional expert regarding bird hazards. This expertise is necessarily advisory in nature and any final decision will be made by the ADO. In no instance will a favorable determination of compatibility for a landfill operation be rendered by the ADO without resolution of any AGL 620 concerns, if any, except with AGL-600 approval.

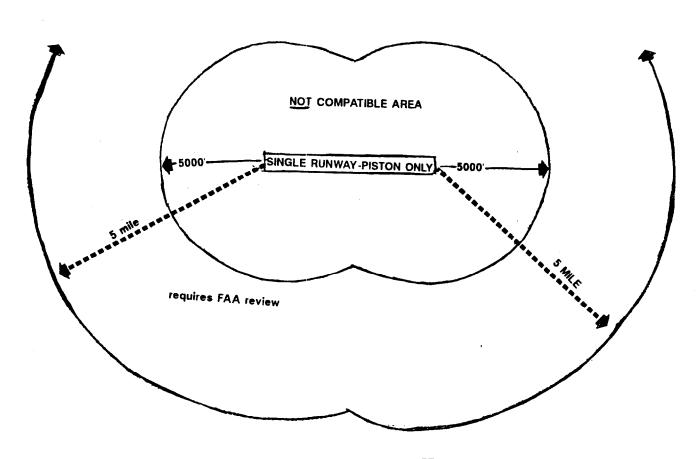
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W. Robert Billingsley Manager, Airports Division



BOTH RUNWAYS HANDLING SAME TYPE AIRCRAFT





SINGLE RUNWAY-PISTON AIRCRAFT



Wednesday October 9, 1991



Environmental Protection Agency

40 CFR Parts 257 and 258
Solid Waste Disposal Facility Cr.teria;
Final Rule



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SATAL PROTECTION

PA/OSW-FR-91-004 FRL-4011-9]

40 CFR Paris 257 and 258

Solid Waste Disposal Facility Criteria

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency today is promulgating revisions to the Criteria for Classification of Solid Waste Disposal Facilities and Practices set forth in 40 CFR part 257. These revisions were developed in response to the 1984 Hazardous and Solid Waste Amendments to the Resource Conservation and Recovery Act (RCRA). Today's rule adds a new part 258, which sets forth revised minimum federal criteria for municipal solid waste landfills (MSWLFs), including location restrictions, facility design and operating criteria, ground-water monitoring requirements, corrective action requirements, financial assurance requirements, and closure and postclosure care requirements. The rule establishes differing requirements for existing and new units (e.g., existing units are not required to remove wastes in order to install liners). In addition, oday's rule amends part 257 by making conforming changes that make it consistent with the new part 258. The specific criteria by which State programs will be approved will be published in a separate rule, which is expected to be proposed in early 1992.

This rulemaking also fulfills a portion of EPA's mandate under section 405(d) of the Clean Water Act (CWA) to promulgate regulations governing the use and disposal of sewage sludge. Part 258 of today's rule is co-promulgated under the authority of the CWA and applies to all MSWLFs in which sewage sludge is co-disposed with household wastes. A separate regulation for sludge monofills (landfills in which only sewage sludge is disposed of) was proposed on February 6, 1989, under part 257 and part 503. The sludge monofill regulations are expected to be finalized by the end of 1991.

EFFECTIVE DATE: October 9, 1993, except subpart G of part 258 is effective April 9.

ADDRESSES: The public record for this rulemaking (docket number F-91-CMLF-FFFFF) is located at the RCRA Docket Information Center, (OS-305), U.S. Environmental Protection Agency Headquarters, 401 M Street, SW. Washington, DC 20460. The public

docket is located at EPA Headquarters and is available for viewing from 9 a.m. to 4 p.m., Monday through Friday, excluding Federal holidays. Appointments may be made by calling (202) 475-9327. Copies cost \$0.15/page. FOR FURTHER INFORMATION CONTACT: For general information, contact the RCRA/Superfund Hotline, Office of Solid Waste, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460. (800) 424-9346, toll-free, or (703) 920-9810, local in the Washington, DC, metropolitan area. For more detailed information on

specific aspects of this final rule, contact Allen Geswein. Paul Cassidy, or Andrew Teplitzky, Office of Solid Waste (OS-301), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460. (202) 260-1099. SUPPLEMENTARY INFORMATION: Copies of the following document are available for purchase through NTIS, U.S. Department of Commerce. Springfield, Virginia 22161, 1 (800) 553-6847 or (703)

(1) U.S. EPA, Office of Solid Waste, December 1990 Regulatory Impact Analysis (RIA) and the August 1991 Addendum for the Final Criteria for Municipal Solid Waste Landfills-(40 CFR part 258)—Subtitle D of the Resource Conservation and Recovery Act (RCRA). August 1991.

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their existing units in these locations, but must comply with the provisions governing new units if they wish to laterally expand. EPA recognizes that applying these provisions to lateral expansions (and new units) will somewhat limit the ability of owners and operators to address capacity needs. However, the Agency believes that the flexibility provided owners and operators to vertically expand existing units will adequately address short-term capacity needs. In addition, the 24month window prior to the effective date of today's rule provides owners and operators time to plan for future capacity needs.

Section 258.29(a) requires the MSWLF owner/operator to record and retain in an operating record any location restriction demonstrations. The final rule allows the Director of an approved State to specify an alternative location for maintaining the operating record and alternative schedules for recordkeeping and notification requirements.

1. Section 258.10 Airport Safety

The proposed criteria specified that new MSWLF units, lateral expansions. and existing MSWLF units located within 10,000 feet (3,048 meters) of any airport runway used by turbojet aircraft or within 5,000 feet (1,524 meters) of any airport runway used by only piston-type aircraft shall not pose a bird hazard to aircraft. These distance limits were derived from the Federal Aviation Administration (FAA) Order 5200.5. "FAA Guidance Concerning Sanitary Landfills on or Near Airports" (October 16. 1974). The proposal was identical to existing \$ 257.3-3, applicable to solid waste disposal facilities.

In general, commenters supported the proposed airport safety criteria: however, some commenters suggested that the Agency consult with the FAA to establish a coordinated national policy for siting of new MSWLF units near airports. Specifically, commenters were concerned that the FAA had placed additional restrictions on siting near airports that were not reflected in EPA's revised criteria.

In response to these comments, the Agency consulted with the FAA on the latest policies for siting near airports. In January 1990, the FAA revised FAA Crder 5200.5, which was the basis for the Agency's existing part 257 criteria and proposed part 258 airport safety provision. Under this revision (FAA order 5200.5A) any waste disposal site located within a five-mile radius of a runway end and that attracts or sustains hazardous bird movements from feeding, water, or roosting areas into, or across the runways and/or approach

and departure patterns of aircraft will be considered "incompatible" with airports. Additionally, any operator proposing a new or expanded waste disposal facility within five miles of a runway end should notify the airport and the appropriate FAA airport office so as to provide an opportunity to review and comment on the site in accordance with FAA guidance. If the disposal facility is determined by the FAA to be incompatible with the airport then under the terms of the order, it should not be sited at that location.

To respond to commenters concerns about the need for a coordinated national policy for siting near airports. the Agency carefully considered modifying § 258.10 so as to make it consistent with the FAA Order 5200.5A. However, the Agency recognizes the public has not had full opportunity to review and comment on these potential additional part 258 requirements for airport safety, particularly substantive new performance criteria and restrictions for new MSWLFs and lateral expansions within five miles of airport runways. Therefore, EPA has decided not to include new performance criteria for MSWLFs within five miles of airport runways, in today's rule. Instead EPA expects to propose additional performance criteria or restrictions for new and expanded MSWLFs near airports when the Agency revises these criteria in the future.

However, EPA believes it is appropriate to include in today's rule one minor procedural element of the revised FAA order-that owners and operators proposing new MSWLF or (lateral) expansions within five miles of a runway notify the affected airport and the appropriate FAA office. EPA believes that this requirement will ensure communication between the owner or operator and the FAA, and facilitate implementation of the revised FAA order by the FAA. EPA believes this requirement partially addresses commenters' concerns about a coordinated national policy on siting near airports. More importantly, today's notification requirement imposes little burden on the owner or operator. EPA believes this burden is particularly small when weighed against the FAA concern that landfills and other waste disposal sites erode the safety of the airport environment. Owners and operators can comply with today's notification requirement simply by submitting letters to the affected airport and the appropriate FAA airports office stating their intent to site a new MSWLF or lateral expansions within five miles of en airport runway. And finally, this notification requirement is a type of

other applicable Federal requirement with which an owner or operator must comply with under § 258.3 of today's rule.

Today's final airport safety criteria applicable to new MSWLFs, existing MSWLFs, and lateral expansions remain unchanged from the proposal, except for minor clarifying language changes. The Agency also wishes to clarify that today's airport safety criteria do not prchibit the disposal of solid waste within the specified distances, unless the owner or operator is unable to make the required demonstration showing that the landfill is designed and operated so as not to pose a bird hazard. Today's regulation simply defines a "danger zone" within which particular care must be taken to ensure that no bird hazard arises. Also, today's requirement applies only to MSWLFs and does not affect the location of airports or airport runways within the specified distance.

Finally, commenters suggested that the terms "bird hazard" and "airport" be defined in the rule language. In today's final rule, the Agency defines those terms by using the definitions currently found in 40 CFR 257.3-8. The rationale for these definitions, which remains valid for purposes of this rule, can be found at 44 FR 53458. September 13. 1979. The definitions are as follows: "A:rport" is a public-use airport open to the public without prior permission and without restrictions within the physical capacities of available facilities." "Bird hezerd" is "an increase in the likelihood of bird/aircraft collisions that may cause damage to the aircraft or injury to its occupants."

2. Section 258.11 Floodplains

The proposed criteria specified that new MSWLF units, lateral expansions, and existing MSWLF units located in 100-year floodplains shall not restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain, or result in the washout of solid waste so as to pose a hazard to human health and the environment. The proposed requirement was identical to the existing part 257 Criteria, which are applicable to all solid waste disposal facilities, including MSWLFs.

The intent of this requirement is to ensure that MSWLFs located in a 160-year floodplains are designed and operated to prevent significant impacts on the 100-year flood flow and water storage capacity. Specifically, disposal of solid waste in floodplains may have the following kinds of significant adverse impacts: (1) If not adequately protected from washout, wastes may be carried by flood waters and flow from

generation; fertilizer/agricultural chemicals; food and related products/ by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products: nonferrous metals manufacturing/foundries; organic chemicals: plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing: transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste.

Lateral expansion means a horizontal expansion of the waste boundaries of an

existing MSWLF unit.

Leachote means a liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.

Municipal solid waste landfill unit means a discrete area of land or an excavation that receives household waste, and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined under § 257.2. A MSWLF unit also may receive other types of RCRA subtitle D wastes, such as commercial solid waste, nonhazardous sludge, small quantity generator waste and industrial solid waste. Such a landfill may be publicly or privately owned. A MSWLF unit may be a new MSWLF unit. an existing MSWLF unit or a lateral expansion.

. New MSWLF unit means any municipal solid waste landfill unit that has not received waste prior to the effective date of this part (October 9,

Open burning means the combustion

of solid waste without:

(1) Control of combustion air to maintain adequate temperature for efficient combustion,

(2) Containment of the combustion reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion, and (3) Control of the emission of the

combustion products.

Operator means the person(s) responsible for the overall operation of a facility or part of a facility.

Owner means the person(s) who owns a facility or part of a facility.

Run-off means any rainwater. leachate, or other liquid that drains over land from any part of a facility.

Run-on means any rainwater, leachate, or other liquid that drains over land onto any part of a facility.

Saturated zone means that part of the earth's crust in which all voids are filled with water.

Sludge means any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant.

Solid waste means any garbage, or refuse, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved materials in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permit under 33 U.S.C. 1342, or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923).

State means any of the several States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

State Director means the chief administrative officer of the State egency responsible for implementing the State municipal solid waste permit program or other system of prior approval.

Uppermost aquifer means the geologic formation nearest the natural ground surface that is an aquifer, as well as, lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.

Waste management unit boundary means a vertical surface located at the hydraulically downgradient limit of the unit. This vertical surface extends down into the uppermost aquifer.

§ 258.3 Consideration of other Federal hws.

The owner or operator of a municipal solid waste landfill unit must comply with any other applicable Federal rules, laws, regulations, or other requirements.

§§ 258.4-258.9 [Reserved]

Subpart B—Location Restrictions

§ 258.10 Airport safety.

(a) Owners or operators of new MSWLF units, existing MSWLF units, and lateral expansions that are located within 10,000 feet (3,048 meters) of any airport runway end used by turbojet aircraft or within 5,000 feet (1,524 meters) of any airport runway end used by only piston-type aircraft must demonstrate that the units are designed and operated so that the MSWLF unit does not pose a bird hazard to aircraft.

(b) Owners or operators proposing to site new MSWLF units and lateral expansions within a five-mile radius of any airport runway end used by turbojet or piston-type aircraft must notify the affected airport and the Federal Aviation Administration (FAA).

(c) The owner or operator must place the demonstration in paragraph (a) of this section in the operating record and notify the State Director that it has been placed in the operating record.

(d) For purposes of this section:

(1) Airport means public-use airport open to the public without prior permission and without restrictions within the physical capacities of available facilities.

(2) Bird hazard means an increase in the likelihood of bird/aircraft collisions that may cause damage to the aircraft or injury to its occupants.

§ 258.11 Floodplains.

(a) Owners or operators of new MSWLF units, existing MSWLF units, and lateral expansions located in 100year floodplains must demonstrate that the unit will not restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain. or result in washout of solid waste so as to pose a hazard to human health and the environment. The owner or operator must place the demonstration in the operating record and notify the State Director that it has been placed in the operating record.

(b) For purposes of this section:

(1) Floodplain means the lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, that are inundated by the 100-year flood.

(2) 100-year flood means a flood that has a 1-percent or greater chance of recurring in any given year or a flood of a magnitude equalled or exceeded once in 100 years on the average over a significantly long period.

(3) Washout means the carrying away of solid waste by waters of the base flood.

§ 258.12 Wetlands.

(a) New MSWLF units and lateral expansions shall not be located in wetlands, unless the owner or operator can make the following demonstrations to the Director of an approved State:

(1) Where applicable under section 404 of the Clean Water Act or applicable State wetlands laws, the presumption that practicable alternative to the